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DIAMOND HILL MINE PROJECT

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Prepared by-

Montana Department of State Lands

Prepared for-

EIS Scoping Meeting
Townsend, MT

April 1995

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SCOPING DOCUMENT
PEGASUS GOLD CORPORATION'S
DIAMOND HILL MINE PROJECT

Procedures governing the decision-making process on state and private lands in Montana are defined in administrative rules implementing the Montana Environmental Policy Act of 1971 (MEPA). This law requires that if any action taken by a state agency may "significantly affect the quality of the human environment," an environmental impact statement (EIS) must be prepared.

The first phase in completing an EIS is to conduct "scoping". The purpose of scoping is to identify the environmental issues associated with the project which will be considered during the EIS process. The EIS will focus on those issues that are most significant. This Scoping Document will acquaint you with the Diamond Hill Mine Project as well as the EIS and decision-making process. The agency welcomes your comments on the issues that you believe should be addressed in the EIS.

THE PROPOSED ACTION-
DIAMOND HILL MINE PROJECT

The Montana Department of State Lands received an application for a Hard Rock Mine Operating Permit for the Diamond Hill Mine Project from Pegasus Gold Corporation (Pegasus) on February 16, 1995. The project area is located approximately 8 miles northwest of Townsend in section 36, Township 7N, Range 1W, and section 1, Township 6N, Range 1W, Broadwater County, Montana (see Figure 1). The proposed project area is on private lands on which Pegasus owns or controls the mineral estate. Exploration activities in the project area currently disturb about 10.3 acres. The proposed project would disturb a total of 34.9 acres.

Mine and mill. The Diamond Hill project would consist of a 1,000 ton-per-day underground mine and flotation mill complex (see Figure 2). The underground mine would be located north of Indian Creek Road about one-half mile west of the confluence of Indian Creek and the West Fork of Indian Creek. The proposal calls for one year of mine and mill construction followed by six years of mining and ore processing with an additional three years of final reclamation. Mining and milling of gold reserves will occur at a rate of approximately 360,000 tons per year. The proposed project would generate up to 290,000 tons of waste material per year. Ore would be ground at the mill and the gold would be concentrated by conventional flotation milling and gravity separation processes. No cyanide would be used in ore processing.

The ore body would be accessed using the single spiral decline permitted under Pegasus' exploration license and constructed in 1994 (Marquis Portal). Ore would be trucked from underground load-out points to the crusher located near the mill. A vertical raise (shaft) is to be constructed from the lower portions of the decline to the surface for ventilation purposes, but may also be utilized to hoist deep ore to the surface if economic conditions permit.

Water flowing into the underground workings along with all stormwater draining from within the permit area would be stored in the stormwater reservoir. This water would then be used for mine and mill make-up water. There would be no discharge of water off the permit area. Any excess water would be disposed through land application or evaporated through misting.

Waste Rock/Tailings Repository. About 646,000 tons of waste rock will be produced over the life of the project. About 84,000 tons of this material will be used to construct the stormwater impoundment. The remainder will be deposited in the waste rock/tailings repository (WR/TR). All waste rock will be amended with crushed limestone to reduce the potential for acid rock drainage.

Residual fine tailings (ground-up rock) remain after precious metals are removed from the ore. These tailings would be vacuum-pressure filtered to reduce the water content. About 1,400,000 tons of this filter-cake tailings, buffered with milk-of-lime during milling, would be placed in the WR/TR and approximately 780,000 tons would be back-filled into the underground workings.

The WR/TR will be constructed in lifts with the less sulfitic amended waste rock surrounding the amended highly sulfitic waste rock and tailings. The tailings placed in the WR/TR would be mechanically compacted and capped with a high density polyethylene textured membrane and an amended waste rock layer. Each lift will be resoiled and revegetated as it is completed.

Roads and Access. Access to the Diamond Hill Project site would be via existing county roads. The primary route would be via Indian Creek Road from its intersection with Montana Highway 287 north of Townsend. The Radersburg Road from Toston, Montana to Crow Creek Road, then to Mud Springs Road which joins Indian Creek Road approximately 2 miles south of the project site would provide secondary access. Large truck traffic would utilize pilot cars and flagmen to minimize conflicts with the public on the county roads.

Roads within the permit area would be upgraded to a standard 20- to 40-foot width. These roads would be closed to the public (see Figure 2).

Employment. Approximately 69 workers in two shifts would be employed at the mine during the production phase. An estimated 40 workers would be needed during mine development and construction, but only 10 workers would be needed during final reclamation activities.

Power Supply and Source. Electrical power would be supplied by a Montana Power Company 100 Kv power line connecting into a power line at the Continental Lime Plant approximately 4 miles west of the proposed project. Diesel fuel, propane, and gasoline would be stored in above ground storage tanks.

Protection of Historic and Archeological sites. These sites would be avoided whenever feasible; however, some surface features (notably old mine waste dumps and tailings) have already been removed to facilitate reclamation and water quality control efforts during exploration. Pegasus commits to recovering artifacts, mapping and photographing features and analyzing any materials recovered during operation, in compliance with legal standards.

Reclamation/Closure. Salvageable soils within disturbed areas and purchased soil would be hauled to areas being reclaimed or stockpiled in storage areas within the permit area. Alluvium from a nearby borrow area (see Figure 2) would be direct hauled for use as a growth medium.

Concurrent reclamation would occur on the WR/TR as each lift is completed and on the cut and fill slopes of access roads within the permit area. Within two years after mining and ore processing operations are completed, final reclamation of the entire area would commence. The mill would be decommissioned, buildings and other structures would be removed and residual water would be used for reclamation purposes or disposed through land application and/or misting. The stormwater reservoir would then be regraded to allow free drainage. The Marquis Portal and raise would be plugged with concrete barriers and the openings back-filled and regraded to blend with adjacent undisturbed land. Roads would also be regraded to approximate original contour.

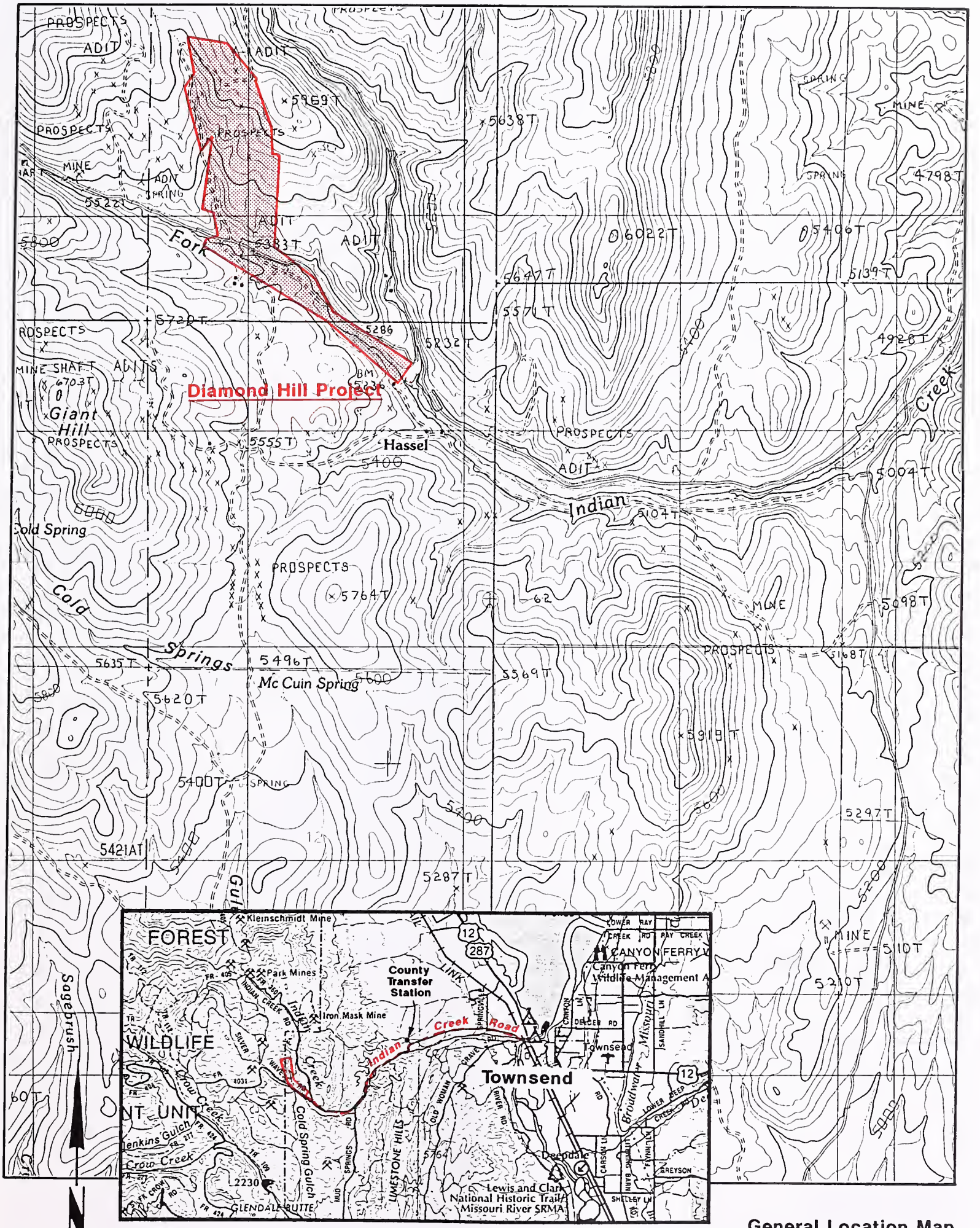
Stockpiled soil, borrowed alluvium and purchased soil would be respread to a depth of 18 inches. Resoiled areas would be seeded and mulched.

Monitoring. Pegasus would conduct monitoring of environmental resources within and near the proposed project area. Monitoring would be conducted for surface and ground waters, air quality, acid-generation potential of waste rock, and compaction and moisture content of graded tailings.

AGENCY RESPONSIBILITY IN THE PERMITTING AND ENVIRONMENTAL IMPACT STATEMENT PROCESS

The Montana Department of State Lands' Hard Rock Bureau is the lead agency for this project. Bud Clinch, Commissioner of DSL, is the responsible decision-making official for the Diamond Hill Mine project.

Decision-making Authority. The Montana Department of State Lands administers the Montana Metal Mine Reclamation Act (MMRA), under which Pegasus has applied for a operating permit. After the final EIS has been issued, the Department of State Lands will make a decision regarding Pegasus' permit request. This decision will be documented in a Record of Decision (ROD). The process will lead to one of the following possible decisions: (1) approval of the plan of operations and application as submitted, (2) approval of the plan of operations and application with changes incorporated, (3) approval of the plan of operations and application subject to stipulations, or (4) denial of the plan of operations and application. The plan must comply with all applicable federal and state air and water quality laws and regulations. Disposal of solid mine wastes, such as tailings, must be conducted to minimized environmental effects. A finding that the mining or reclamation plans would violate laws administered by the DSL (primarily the MMRA), or water or air quality laws administered by the Department of Health and Environmental Science (DHES), would be grounds for DSL to deny the permit application.



General Location Map
Diamond Hill Mine Project
Broadwater County, Montana
FIGURE 1

HE&E 93-3537

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N. 11000
N. 10000
N. 9000
N. 8000
E. 11000
E. 10000
E. 9000

West Fork Indian Creek
Alluvial Borrow Area
LAD Area
Enhanced Evaporation Misting Apron
Crusher Facility
Head Tank
Stormwater Reservoir
Seepage Collection Pond
County Road
Property Boundary
Property Boundary
Waste Rock Tailings Repository
Mill/Dry/Office Complex
Thickener Tank
Mill Pond
Office
Raise
Marquis Portal
Seepage Collection Pond
Indian Creek
West Fork

400 Feet

N

Proposed Facilities
Diamond Hill Mine Project
Broadwater County, Montana
FIGURE 2

HE&E 93-3537

THE ENVIRONMENTAL IMPACT STATEMENT AND PERMITTING PROCESS

The department reviews the application for completeness, and initiates the EIS process. After reviewing the application, the agency will either request clarification, additional information, or will declare the application complete. DSL has not yet declared Pegasus' application complete. Pegasus is currently preparing responses to completeness questions posed by DSL. Additional questions that may arise after completeness is declared and during the EIS preparation will also necessitate responses from Pegasus.

Through *scoping*, the collection of written and verbal issues and concerns, the agency identifies environmental issues associated with the project. Based on these issues, the agency develops reasonable alternatives to the proposed action, and identifies mitigation measures to reduce environmental impacts. Scoping is not a voting contest, but a process to identify the issues that the agency will consider in the EIS process. The agency will address all substantive issues raised.

Environmental issues already identified by the agency are listed at the end of this document. The list of issues will be revised in response to additional issues submitted at the scoping meeting, or by mail. Issues already identified by the agency will be addressed in the EIS and do not need to be resubmitted.

Scope of the Analysis. The environmental analysis phase of the EIS process will begin after scoping (Figure 3). The EIS will present an analysis of the issues identified as they relate to the physical, biological, social and economic effects of the proposed project and various alternatives. The analysis will focus on those significant and substantive issues identified during scoping.

The scope of the EIS will include analyzing the direct, indirect, and cumulative impacts of --

- Mining and processing of known gold reserves in the West Fork of Indian Creek;
- Construction and operations of the necessary support facilities such as mill and the waste rock/tailings repository, and the stormwater reservoir.
- Reclaiming the project in accordance with applicable law and regulations; and
- Other past, present or reasonably foreseeable activities.

The agency will develop alternatives in response to the significant issues identified during scoping. Alternatives will be designed to minimize or reduce the magnitude or intensity of the potential impacts. The agency will also analyze the "no action" alternative.

Public Participation. The Department of State Lands encourages your participation in the EIS process. There are a number of places in the EIS process where public comment is solicited by the agency (Figure 3). You may submit oral or written comments at the public meeting or mail comments using the form attached to this document.

After publication and distribution of the draft EIS, the agency will solicit public comment on the environmental impact analysis. A final EIS will address all substantive public comment.

WRITTEN COMMENTS

We welcome your comments concerning what environmental issues should be considered in the EIS. These may be submitted at the public meeting or mailed by May 5, 1995 to:

Kathleen Johnson, Project Coordinator
Montana Department of State Lands
P.O. Box 201601
Helena MT 59620-1601

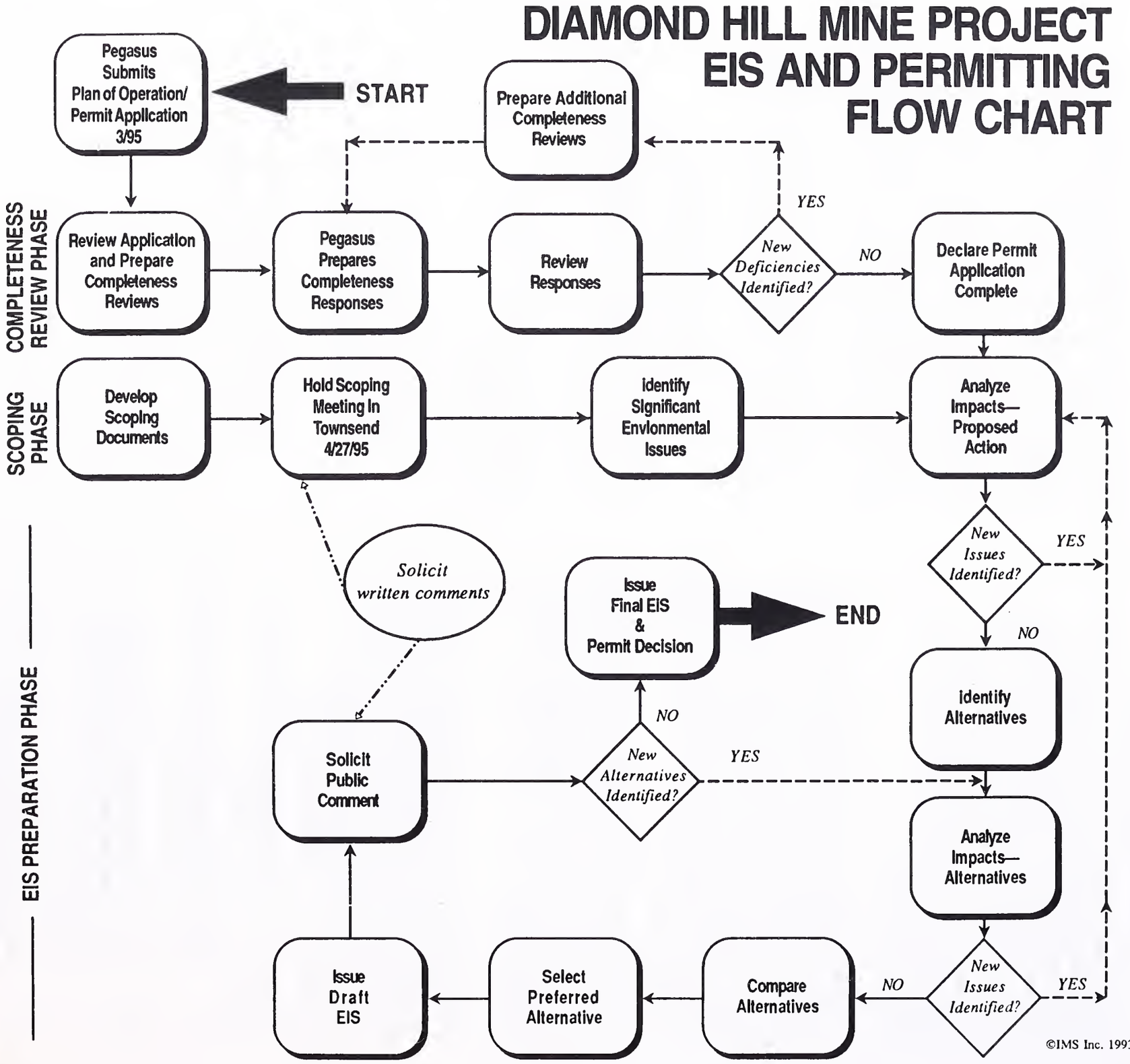
DETAILED INFORMATION AVAILABLE

A copy of the mine permit application can be reviewed at:

Montana Department of State Lands, Helena, MT

Broadwater County Library, Townsend, MT

Figure 3


DIAMOND HILL MINE PROJECT
EIS AND PERMITTING
FLOW CHART
COMPLETENESS REVIEW PHASE
SCOPING PHASE
EIS PREPARATION PHASE
Pegasus Submits Plan of Operation/ Permit Application 3/95
START
Prepare Additional Completeness Reviews
Review Application and Prepare Completeness Reviews
Pegasus Prepares Completeness Responses
Review Responses
New Deficiencies Identified?
YES
NO
Declare Permit Application Complete
Develop Scoping Documents
Hold Scoping Meeting In Townsend 4/27/95
Identify Significant Environmental Issues
Analyze Impacts— Proposed Action
New Issues Identified?
YES
NO
Solicit written comments
Issue Final EIS & Permit Decision
END
Identify Alternatives
Solicit Public Comment
New Alternatives Identified?
NO
YES
Analyze Impacts— Alternatives
Issue Draft EIS
Select Preferred Alternative
Compare Alternatives
NO
New Issues Identified?
YES
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IDENTIFIED ENVIRONMENTAL ISSUES
(alphabetical order)

The Department of State Lands has identified several potential issues which are listed below. DSL intends to examine these issues in the context of the proposed plan and resources present at the site to determine whether the potential effects identified below would or would not occur.

AIR QUALITY

Ambient Air Quality-- Would project construction and operation increase the ambient particulate and gaseous concentrations in the area, which includes the Elkhorn Cooperative Management area?

CULTURAL RESOURCES

Protect Historic/Prehistoric properties-- Would project construction affect historically important attributes in the area? The project site is part of the historic Hassel Mining district, and at least one identified prehistoric lithic scatter site is present in the area.

CUMULATIVE EFFECTS

Project area-- Additional exploration in and near the proposed project could reveal additional reserves of ore. Would future mining of additional ore have cumulative environmental effects with the proposed project?

Reasonably Foreseeable Actions-- Other activities in the project area including timber sales, road building or other mining projects (such as the Elkhorn exploration project near the Elkhorn townsite). Would this project have cumulative impacts in conjunction with these activities?

FACILITY DESIGN/CONSTRUCTION

Acid Rock Drainage Potential-- The ore and waste rock at the Diamond Hill mine site are sulfitic in nature. Exposure to air and water can produce a highly acid drainage with elevated metal concentrations. The proposed mine facilities are designed to reduce the possibility of this acid rock drainge formation. Are there alternative designs or actions which would further reduce the potential for acid rock drainage?

Stormwater Pond design-- The proposed Stormwater impoundment is to be constructed on areas of historic mining. Could existing underground workings weaken the structure and cause failure?

Waste Rock/Tailings Repository (WR/TR)-- The proposed WR/TR is to be built on a hillside within the project area. Could the gradient cause the WR/TR to fail and cause waste material to reach the drainage leading to the West Fork of Indian Creek?

HAZARDOUS MATERIALS

The proposed mining and milling operations may require using hazardous materials. Are spillages possible during transportation, handling, and/or storage of these materials? How would such spills be contained to eliminate potential adverse effects to wildlife and human health, and to soil and water?

RECREATION/VISUAL/NOISE

Recreation-- The project area is located near the Elkhorn Cooperative Management Area. Could the proposed mining activities interfere with recreational opportunities or other management goals within the management area?

Noise-- Would mine construction and operation increase the noise level in the Indian Creek drainage? How would such noise affect recreationists, residents, and wildlife?

Visual Quality--The proposed mine disturbances will not blend in with the natural surroundings. Would the proposed activities adversely affect the viewsheds for recreationists?

SOCIO-ECONOMICS

Would the proposed project may increase the number of people living and/or working in the area? Would such an increase in population affect community services, fire and police protection, garbage collection, and housing availability? Would the activities increase conflict with others (social systems, recreationist, etc.); change the

structure of the economy, or have fiscal impact (revenue vs. costs)?

SUBSIDENCE

Could the proposed underground workings cause subsidence at the surface? How would such subsidence affect such resources as vegetation and water?

TRAFFIC SAFETY

The proposed access route through Indian Creek Canyon is very narrow and twisting. Would the additional mine-related traffic cause dangerous conditions in the canyon?

WILDLIFE

Bighorn Sheep-- In March of 1995, the BLM and the U.S. Forest Service issued a Record of Decision approving the reintroduction of Bighorn Sheep to the Elkhorn Mountains, specifically, to the Indian Creek and Crow Creek drainages. Would mining and construction activities adversely affect the reintroduced animals?